



United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-----------------|----------------------|---------------------|------------------|
| 10/666,741 | 09/19/2003 | Yiqing Liang | 1617880-0002 CON | 6058 |
| 7470 | 7590 04/13/2006 | | EXAMINER | |
| WHITE & CASE LLP PATENT DEPARTMENT | | | AZARIAN, SEYED H | |
| 1155 AVENUE OF THE AMERICAS NEW YORK, NY 10036 | | | ART UNIT | PAPER NUMBER |
| | | | 2624 | |

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) | |
|--|--|--|-------------------------|
| Supplemental | 10/666,741 | LIANG ET AL. | |
| Notice of Allowability | Examiner | Art Unit | |
| | Seyed Azarian | 2627 | |
| The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT I of the Office or upon petition by the applicant. See 37 CFR 1.31 1. This communication is responsive to fax inquiry filed 1/10 | S (OR REMAINS) CLOSED in 5) or other appropriate common RIGHTS. This application is some mand MPEP 1308. | n this application. If not included unication will be mailed in due co | l ourse. THIS |
| 2. X The allowed claim(s) is/are 43-51 and 53-80 now renumb | <u>ered as 1-37</u> . | | |
| 3. Acknowledgment is made of a claim for foreign priority of a) All b) Some* c) None of the: 1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority of International Bureau (PCT Rule 17.2(a)). * Certified copies not received: Applicant has THREE MONTHS FROM THE "MAILING DATE noted below. Failure to timely comply will result in ABANDON THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 4. A SUBSTITUTE OATH OR DECLARATION must be substituted in INFORMAL PATENT APPLICATION (PTO-152) which gives 1. CORRECTED DRAWINGS (as "replacement sheets") must be substituted in cluding changes required by the Notice of Draftspe 1. hereto or 2. To Paper No./Mail Date (b) including changes required by the attached Examine Paper No./Mail Date (beautifying Indicia such as the application number (see 37 CFR | ve been received. ve been received in Application ocuments have been received " of this communication to file MENT of this application. mitted. Note the attached EXA ves reason(s) why the oath of ust be submitted. rson's Patent Drawing Review — r's Amendment / Comment of | an No Id in this national stage application in this national stage application is a reply complying with the requal AMINER'S AMENDMENT or NO declaration is deficient. In the Office action of | irements |
| each sheet. Replacement sheet(s) should be labeled as such in | the header according to 37 CF | R 1.121(d). | |
| 6. DEPOSIT OF and/or INFORMATION about the dep attached Examiner's comment regarding REQUIREMENT attached Examiner's comment regarding REQUIREMENT | | | ote the |
| Attachment(s) 1. ☐ Notice of References Cited (PTO-892) | 5 Motice of In | formal Patent Application (PTO- | 152) |
| 2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) | 6. ☐ Interview S Paper No. | ummary (PTO-413), Mail Date | / |
| Information Disclosure Statements (PTO-1449 or PTO/SB. Paper No./Mail Date | /08), 7. ⊠ Examiner's | Amendment/Comment | |
| Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. 🛭 Examiner's | Statement of Reasons for Allow | ance |
| | 9. 🔲 Other | _• | |
| | | | |

Application/Control Number: 10/666,741 Page 2

Art Unit: 2624

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR
 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

2. Authorization for this examiner's amendment was given in a telephone interview with Applicants Attorney (Wendi R. Schepler, Reg No. 43,091), on January 10, 2006, without traverse.

3. The application has amended as follows: attach paper

In the claims

payment of the issue fee.

Application/Control Number: 10/666,741 Page 3

Art Unit: 2624

REASONS FOR ALLOWANCE

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/15/2005 has been entered.

5. The following is an examiner's statement of reasons for allowance.

Based on telephone interview and fax inquiry, filed 1/10/2006, see page 11 through page 20, of the remarks, with respect to claims 43-51 and 53-80 have been fully considered and are persuasive and upon further consideration the 103(a) art rejection of claims 43-51 and 53-80, has been withdrawn.

6. Claims 43-51 and 53-80 now renumbered as 1-37 is allowed.

Based on applicant's amendment, claim 43 representing claims 51,64 and 75, the closest prior art of record (Maki and Fowler) references do not disclose or suggest, among other things, "third module is configured using the plurality

of shape and posture categories and standard object behaviors, and is further configured to analyze temporal ordering of behavior primitives using time-series analysis to identify a transition from a previous behavior primitive to a next behavior primitive.

These key features in combination with the other features of the claimed invention are neither taught nor suggested by (Maki and Fowler) prior art of record.

Art Unit: 2624

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (571) 272-7443. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached at (571) 272-7443. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.

Status information about the PAIR system, see http:// pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Seyed Azarian Patent Examiner Group Art Unit 2627 January 17, 2006

PRIMARY EXAMINER

- 43. (currently amended) A device comprising:
 - a first module configured to receive video images and to identify objects of interest in response to the video images;
 - a second module coupled to the first module and configured to classify a plurality of shape and posture categories based on a plurality of observed states of the objects of interest; and
 - a third module coupled to the second module, wherein the third module is configured to identify behaviors of the objects of interest using the plurality of shape and posture categories and standard object behaviors, and is further configured to analyze temporal ordering of behavior primitives using time-series analysis to identify a transition from a previous behavior primitive to a next behavior primitive.
- 51. (currently amended) A method of characterizing an activity comprising:
 obtaining a stream of video image frames from a monitoring device;
 identifying objects of interest from the stream of video image frames;
 providing feature information of the objects of interest in response to the stream of video image frames;

classifying postures of the objects of interest in response to the feature information;

obtaining standard object behaviors from a storage memory device; and characterizing behaviors of the objects of interest in response to a comparison between the postures of the objects of interest and the standard object behaviors, wherein the characterizing the behaviors of the objects of interest further includes analyzing temporal ordering of behavior primitives using time-series analysis to identify a transition from a previous behavior primitive to a next behavior primitive.

52. (currently canceled)

53. (currently amended) the method of claim 52 51 wherein the time-series analysis further includes employing Hidden Markov Models (HMMs).